UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,559	08/21/2003	Thomas W. Odell	GP-302521	9422

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EXAMINER
JACKSON, BLANE J

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *11 September 2006*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,4,6-8,10-12,14-19 and 21-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,4,6-8,10-12,14-19 and 21-25* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *21 August 2003* is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's amendment with arguments, see Remarks, filed 11 September 2006,

with respect to the rejection(s) of claim(s) 1, 2, 4, 6-8, 10-12, 18 and 19 under Silver

have been fully considered and are persuasive. Therefore, the rejection has been

withdrawn. However, upon further consideration, a new ground(s) of rejection is made

in view of Silver in combination with Hennecke et al.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 6-8, 10-12, 14-18 and 21-25 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Silver (US 6,876,970) in view of Hennecke et al. (Us

2004/0034527).

As to claims 1 and 11, Silver teaches a method of operating and a vehicle radio

system comprising:

A radio receiver that is configured to receive a radio signal from a broadcast

station (figure 1, column 4, lines 5-13, broadcast receiver (100) discussed as an AM/

FM radio installed in a vehicle),

A microphone that is configured to receive an audible from an operator of the

vehicle radio system and generate an audible signal from said audible (figure 1, column

4, lines 14-45, microphone (110)),

A tuning module configured to receive said radio signal from said radio receiver

and said audible signal from said microphone (column 4, lines 29-57, processor (140)

determines tuned station based on voice input), said tuning module comprising:

A storage module configured to store a fist phoneme string and a first channel

number associated with said first phoneme string (column 4, lines 39-57, first phoneme

example is voiced "FM 107.9" to be compared with the same speech segment stored in

memory (150)),

A voice recognition engine configured to compare a phoneme in said audible

signal with said first phoneme string stored in said storage module (column 4, lines 39-

57, digitized "FM 107.9" is compared to stored same speech segment),

A tuner configured to tune said radio receiver to said first channel number when

said voice recognition engine identifies said phoneme as said first phoneme string

(figure 1, column 4, lines 46-57, processor (140) instructs tuner (160) to tune to the

audible frequency if a match is made of the audible signal to a speech segment store in

memory).

Silver teaches the channel-specific phoneme string used by the processor for

comparison to voice commands are previously stored in memory and can be

established by a manufacturer of the receiver or created or by the user in a training

mode of the receiver, column 4, lines 46-65, but does not teach a first channel-specific

phoneme string associated with a first channel number is received by the receiver from a broadcast station.

Hennecke teaches a speech recognition system for speech-guided control of various electronic applications including destination guidance systems, telephone and/ or address systems for vehicles, paragraphs 0006, 0015 and 0016. Hennecke further discloses the speech recognition system breaks down the voice input into phonemes and matches the phonemes into a list or group list of *related or unrelated data* in a matching unit and database (7) database, figure 1, paragraphs 0017-0019. Hennecke relates the list of stored data or list elements may be installed on the matching unit and database during manufacture, and/ or during subsequent operation of the electrical device by the user (trained) or the list may be downloaded via a communication system such as a landline and wireless radio networks, a global satellite network and the like, paragraph 0019.

Since Hennecke teaches a vehicle based speech recognition system like Silver which can be configured to recognize voice commands based on stored data input by the manufacturer or trained by the user, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the voice recognition system of Silver with the additional data download training method of Hennecke to simplify accurate operation of the vehicular application of a voice recognition system.

As to claims 2 and 12 with respect to claims 1 and 11, Silver teaches said storage module is configured to store a second phoneme string and a second channel

number associated with said second phoneme string (column 4, line 58 to column 5,

line 40),

Said voice recognition engine is configured to compare said phoneme in said

audible signal with said second phoneme string stored in said storage module (column

5, lines 53-59, processor (140) compares the specific voice audible command with the

commands previously stored in memory (150)), and

The tuner is configured to tune said radio receiver to one of multiple channel

number when said voice recognition engine identifies said phoneme as one of a multiple

phoneme string (figure 2, column 5, lines 60-65, with a match, the processor instructs

the tuner to tune in to the channel that has been associated with the voice command).

Claims 3 and 13 are cancelled.

As to claims 4 and 14 with respect to claims 1 and 11, Silver teaches the vehicle

radio system wherein:

Said storage module is configured to store a second phoneme string and a first

programming format associated with said second phoneme string (figure 4, column 6,

line 41 to column 7, line 10, example is a television set, voice command is associated

with programming genre),

Said voice recognition engine is configured to compare said phoneme is said

audible signal with said second phoneme string stored in said storage module and

Said tuner is configure to tune said radio receiver to a second channel number

associated with said voice recognition engine identifies said phoneme as said second

phoneme string (Table 3, column 7, lines 38).

Claim 5 is cancelled.

As to claims 6 and 7 with respect to claim 1 and claims 16 and 17 with respect to

claim 11, Silver teaches a receiver to reproduce broadcast programming, column 4,

lines 5-13, but is silent as to the radio signal transmitted by the broadcast service is a

digital radio signal or a satellite broadcast service.

Hennecke teaches a speech recognition system for vehicular navigation or

telephone systems where the voice command models or list may be downloaded via a

global satellite network or the like, paragraph 0018.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to recognize in the broadcast receiver of Silver the alternative data networks

as taught by Hennecke for alternative selection of audio programs.

As to claims 8 and 18 with respect to claims 1 and 11, Silver teaches the vehicle

radio system wherein:

Said storage module is configured to store a second phoneme string and a first

functional command associated with said second phoneme string (column 7, lines 39-

57, second phoneme string is "activate voice command" is a triggering word or phrase
from a user to enable a receiver to take voice command),

Said voice recognition engine is configured to compare said phoneme in said
audible signal with said second phoneme string stored in said storage module and
request said first functional command when said voice recognition engine identifies said
phoneme as said second phoneme string (column 4, lines 60 to column 6, line 10, a
specific speech segment is matched to a voice command in memory and column 7, line
58 to column 8, line 17).

Claim 9 is cancelled.

As to claim 10, Hennecke of Silver modified teaches the vehicle radio system as
set forth in claim 1 wherein said first phoneme string is a phonetic spelling of said first
channel number (paragraph 0023, the recognition process is configured to recognize
phonetic subunits to separate the voice input into parts such as parts of phonemes,
letters, syllables and the like).

As to claim 15 with respect to claim 14, Silver teaches wherein said first
programming format is a sports programming format (column 6, lines 40-60, Table 3,
several genre including sports is listed).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silver et
al. (US 6,876,970).

As to claim 19 with respect to claim 18, Silver teaches command phrases station select and a control phrase to enable voice command, column 7, lines 40-43, but is silent as to the functional command is a volume command. However, Silver also teaches various speech segments may comprise "stop", "I like this" and "news" that will trigger receiver control provided that the subsequent speech segment has been previously stored in memory (350) as a voice command, therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further program the voice command system of Silver with any further useful voice commands for convenient control of the receiver.

Claim 20 is cancelled.

As to claims 21 and 25, Silver teaches a method of operating a vehicle radio system including a microphone and a tuner comprising the steps of:

Receiving a first and second radio channel (figure 1, column 4, lines 5-57, broadcast programming receiver (100) comprises a microphone (110) and tuner (160)),

Generating a first phoneme string (column 4, line 58 to column 5, line 2, the user adapts the receiver for a training mode),

Storing the first and second phoneme string and the frequency of the radio channel in a look-up table (column 5, line 3-40, specific relationships between voice commands and channel frequencies stored as shown in tables 1 and 2),

Registering a voice command with the microphone (column 5, lines 53-59

microphone captures a user speech segment or voice command),

Comparing the voice command with the first and second phoneme string (column

5, lines 53-59, processor (140) compares the received voice command to voice

commands previously stored in memory (150)),

Tuning the tuner to the frequency of the first or second radio channel when the

registered voice command corresponds to the respective first or second phoneme string

(column 5, line 60 to column 6, line 10).

Silver teaches the channel-specific phoneme string used by the processor for

comparison to voice commands are previously stored in memory and can be

established by a manufacturer of the receiver or created or by the user in a training

mode of the receiver; column 4, lines 46-65, but does not teach receiving a first radio

channel and the phonetic spelling of at lest one word associated therewith and

generating a first phoneme string form the phonetic spelling.

Hennecke teaches a speech recognition system for speech-guided control of

various electronic applications including destination guidance systems, telephone and/

or address systems for vehicles, paragraphs 0006, 0015 and 0016. Hennecke further

discloses the speech recognition system breaks down the voice input into phonemes

and matches the phonemes into a list or group list of *related or unrelated data* in a

matching unit and database (7) database, figure 1, paragraphs 0017-0019. Hennecke

discloses the first recognition process separates the sequence of voice subunits to be

mapped to a sequence of consecutive characters to match the characters within the

stored command list, the characters comprising phonemes, letters or syllables or the

like, paragraph 0023-0025. Hennecke relates the list of stored data or list elements may

be installed on the matching unit and database during manufacture, and/ or during

subsequent operation of the electrical device by the user (trained) or the list may be

downloaded via a communication system such as a landline and wireless radio

networks, a global satellite network and the like, paragraph 0019.

Since Hennecke teaches a vehicle based speech recognition system like Silver

which can be configured to recognize voice commands based on stored data input by

the manufacturer or trained by the user, it would have been obvious to one of ordinary

skill in the art at the time of the invention to modify the voice recognition system of Silver

with the additional data download training method of Hennecke to simplify accurate

operation of the vehicular application of a voice recognition system.

As to claim 22 with respect to claim 21, Hennecke of Silver modified teaches the

vehicle radio system further comprises a transceiver and the method further comprises

emitting a request for the phonetic spelling of at lest one work associated with the first

radio station (paragraphs 0019 and 0024, the list of user command phonemes or

characters must be requested for download via a wireless radio network).

As to claim 23 with respect to claim 22, Silver or Silver modified teaches the

claim elements of claim 23 in claim 22 (claim 21) except where Hennecke of Silver

modified taught receiving a plurality of radio channels and the phonetic spelling of at

least one word associated with each of the plurality of radio channels and generating a

plurality of phoneme strings for each of the phonetic spellings, paragraphs 0019 and

0023-0025,

As to claim 24 with respect to claim 21, Silver teaches the at least one work

comprises a radio station call name (tables 1 and 2, column 5, lines 3-40, specific voice

commands include a specific radio station call name).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blane J. Jackson whose telephone number is (571) 272-7890. The examiner can normally be reached on Monday through Friday, 9:00 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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